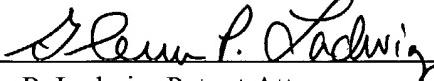


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Glenn P. Ladwig, Patent Attorney

INFORMATION DISCLOSURE  
STATEMENT  
Examining Group 1651  
Patent Application  
Docket No. USF-T173CXC1  
Serial No. 09/914,508

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : Vera Afremova  
Art Unit : 1651  
Applicants : Beerelli Seshi  
Serial No. : 09/914,508  
Filed : November 7, 2001  
Conf. No. : 8090  
For : Human Mesenchymal Progenitor Cell

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§1.97 AND 1.98

Sir:

In accordance with 37 CFR §1.56, the references listed on the attached form PTO/SB/08 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application. Copies of the cited documents are enclosed.

The applicant respectfully asserts that the substantive provisions of 37 CFR §§1.97 and 1.98 are met by the foregoing statements.

Respectfully submitted,



Glenn P. Ladwig

Patent Attorney

Registration No. 46,853

Phone No.: 352-375-8100

Fax No.: 352-372-5800

Address: 2421 N.W. 41st Street, Suite A-1  
Gainesville, FL 32606-6669

GPL/mv

Attachments: Form PTO/SB/08 (5 pages); copies of references cited therein.



PTO/SB/08A (08-03)

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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE



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Substitute for form 1449A/PTO				<b>Complete if Known</b>	
				Application Number	09/914,508
				Filing Date	November 7, 2001
				First Named Inventor	Beerelli Seshi
				Art Unit	1651
				Examiner Name	Vera Afremova
Sheet	1	of	5	Attorney Docket Number	USF-T173CXC1

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	U1	US-5,521,067	05-28-1996	Seshi	All
	U2	US-			
	U3	US-			
	U4	US-			
	U5	US-			
	U6	US-			
	U7	US-			
	U8	US-			
	U9	US-			

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)			
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	F2				
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Sheet

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Group Art Unit	1651
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	R1	CHAKRABARTI, O. and S. KRISHNA "Molecular interactions of 'high risk' human papillomaviruses E6 and E7 oncoproteins: implications for tumour progression" <i>J. Biosci.</i> , 2003, 28(3):337-348.	
	R2	CHARBORD, P. et al. "Stromal cells from human long-term marrow cultures, but not cultured marrow fibroblasts, phagocytose horse serum constituents: studies with a monoclonal antibody that reacts with a species-specific epitope common to multiple horse serum proteins" <i>Exp. Hematol.</i> , 1987, 15:72-77.	
	R3	CONGET, P.A. and J.J. MINGUELL "Phenotypical and functional properties of human bone marrow mesenchymal progenitor cells" <i>J. Cell. Physiol.</i> , October 1999, 181:67-73.	
	R4	DENNIS, J.E. et al. "A quadripotential mesenchymal progenitor cell isolated from the marrow of an adult mouse" <i>J. Bone and Mineral Res.</i> , 1999, 14(5):700-709.	
	R5	DEUNSING, S. and K. MUNGER "The human papillomavirus type 16 E6 and E7 oncoproteins independently induce numerical and structural chromosome instability" <i>Cancer Res.</i> , 2002, 62:7075-7082.	
	R6	DEUNSING, S. et al. "The human papillomavirus type 16 E6 and E7 oncoproteins cooperate to induce mitotic defects and genomic instability by uncoupling centrosome duplication from the cell division cycle" <i>PNAS</i> , 2000, 97(18):10002-10007.	
	R7	DORSHKIND, K. "Multilineage development from adult bone marrow cells" <i>Nature Immunology</i> , 2002, 3(4):311-313.	
	R8	DURST, M. et al. "Inverse relationship between human papillomavirus (HPV) type 16 early gene expression and cell differentiation in nude mouse epithelial cysts and tumors induced by HPV-positive human cell lines" <i>J. Virology</i> , 1991, 65(2):796-804.	
	R9	FRIEDENSTEIN, A.J. et al. "Fibroblast precursors in normal and irradiated mouse hematopoietic organs" <i>Exp. Hemat.</i> , 1976, 4:267-274.	
	R10	EAVES, A.C. and C.J. EAVES "Maintenance and proliferation control of primitive hemopoietic progenitors in long-term cultures of human marrow cells" <i>Blood Cells</i> , 1988, 14:355-368.	
	R11	GERSON, S.L. "Mesenchymal stem cells: No longer second class marrow citizens" <i>Nature Med.</i> , 1999, 5(3):262-264.	
	R12	GRAF, L. et al. "Gene expression profiling of the functionally distinct human bone marrow stromal cell lines HS-5 and HS-27a" <i>Blood</i> , 2002, 100(4):1509-1511.	
	R13	GRAVITT, P. "HPV: The ultimate cancer initiator?" <i>HPV Today</i> , No. 3, September 2003, pp. 1-4.	

Examiner Signature

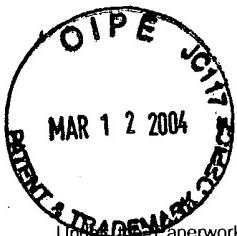
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Sheet

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### Complete if Known

Application Number	09/914,508
Filing Date	November 7, 2001
First Named Inventor	Beerelli Seshi
Group Art Unit	1651
Examiner Name	Vera Afremova
Attorney Docket Number	USF-T173CXC1

### NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	R14	HAYNESWORTH, S.E. et al. "Characterization of cells with osteogenic potential from human marrow" <i>Bone</i> , 1992, 13:81-88.	
	R15	HAYNESWORTH, S.E. et al. "Cell surface antigens on human marrow-derived mesenchymal cells are detected by monoclonal antibodies" <i>Bone</i> , 1992, 13:69-80.	
	R16	HENDERSON, A.J. et al. "Functional characterization of two stromal cell lines that support B lymphopoiesis" <i>J. Immunology</i> , 1990, 145:423-428.	
	R17	HICOK, K.C. et al. "Development and characterization of conditionally immortalized osteoblast precursor cell lines from human bone marrow stroma" <i>J. Bone and Mineral Res.</i> , 1998, 13(2):205-217.	
	R18	HORWITZ, E.M. et al. "Transplantability and therapeutic effects of bone marrow-derived mesenchymal cells in children with osteogenesis imperfecta" <i>Nature Med.</i> , 1999, 5(3):309-313.	
	R19	IWATA, M. et al. "Functional interleukin-7 receptors (IL7R) are expressed by marrow stromal cells: binding of IL-7 increases levels of IL-6 mRNA and secreted protein" August 2002 (epub date May 2002), 100:1318-1325.	
	R20	KEATING, A. et al. "Donor origin of the <i>in vitro</i> haematopoietic microenvironment after marrow transplantation in man" <i>Nature</i> , 1982, 298:280-283.	
	R21	KELLY, K.A. and J.M. GIMBLE "1,25-Dihydroxy vitamin D <sub>3</sub> inhibits adipocyte differentiation and gene expression in murine bone marrow stromal cell clones and primary cultures" <i>Endocrinology</i> , 1998, 139:2622-2628.	
	R22	KOÇ, O.N. et al. "Bone marrow-derived mesenchymal stem cells remain host-derived despite successful hematopoietic engraftment after allogeneic transplantation in patients with lysosomal and peroxisomal storage diseases" <i>Exp. Hematology</i> , 1999, 27:1675-1681.	
	R23	KOPEN, G.C. et al. "Marrow stromal cells migrate throughout forebrain and cerebellum, and they differentiate into astrocytes after injection into neonatal mouse brains" <i>Proc. Natl. Acad. Sci. USA</i> , 1999, 96:10711-10716.	
	R24	LIESVELD, J.L. et al. "Characterization of human marrow stromal cells: Role in progenitor cell binding and granulopoiesis" <i>Blood</i> , 1989, 73(7):1794-1800.	
	R25	MOORE, M.A.S. et al. "Prolonged hematopoiesis in a primate bone marrow culture system: Characteristics of stem cell production and the hematopoietic microenvironment" <i>Blood</i> , 1979, 54(4):775-793.	
	R26	PARK, S.R. et al. "Interconversion potential of cloned human marrow adipocytes <i>in vitro</i> " <i>Bone</i> , 1999, 24(6):549-554.	

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Sheet

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Application Number	09/914,508
Filing Date	November 7, 2001
First Named Inventor	Beerelli Seshi
Group Art Unit	1651
Examiner Name	Vera Afremova
Attorney Docket Number	USF-T173CXC1

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	R27	PENN, P.E. et al. "Dissecting the hematopoietic microenvironment. IX. Further characterization of murine bone marrow stromal cells" <i>Blood</i> , 1993, 81(5):1205-1213.	
	R28	PESSINA, A. et al. "Expression of B cell markers on SR-4987 cells derived from murine bone marrow stroma" <i>Exp. Hematology</i> , 1997, 25:536-541.	
	R29	PROCKOP, D.J. "Marrow stromal cells as stem cells for nonhematopoietic tissues" <i>Science</i> , 1997, 276:71-74.	
	R30	ROECKLEIN, B.A. and B. TOROK-STORB "Functionally distinct human marrow stromal cell lines immortalized by transduction with the human papilloma virus E6/E7 genes" <i>Blood</i> , 1995, 85(4):997-1005.	
	R31	SESHI, B. et al. "Multilineage gene expression in human bone marrow stromal cells as evidenced by single-cell microarray analysis" <i>Blood Cells, Molecules, and Diseases</i> , 2003, 31:268-285.	
	R32	SILER, U. et al. "Laminin $\gamma 2$ chain as a stromal cell marker of the human bone marrow microenvironment" <i>Brit. J. Haematology</i> , 2002, 119:212-220.	
	R33	SIMMONS, P.J. et al. "Host origin of marrow stromal cells following allogeneic bone marrow transplantation" <i>Nature</i> , 1987, 328:429-432.	
	R34	SINGER, J.W. et al. "Evidence for a stem cell common to hematopoiesis and its <i>in vitro</i> microenvironment: Studies of patients with clonal hematopoietic neoplasia" <i>Leukemia Res.</i> , 1985, 8(4):535-545.	
	R35	STEDMAN, T.L., Stedman's Medical Dictionary, 5 <sup>th</sup> Edition, 1984, pp. 931-932.	
	R36	STOPPLER, H. et al. "The human papillomavirus type 16 E6 and E7 oncoproteins dissociate cellular telomerase activity from the maintenance of telomere length" <i>J. Biol. Chem.</i> , 1997, 272(20):13332-13337.	
	R37	TAICHMAN, R.S. et al. "Human osteoblasts support human hematopoietic progenitor cells in <i>in vitro</i> bone marrow cultures" <i>Blood</i> , 1996, 87(2):518-524.	
	R38	TOROK-STORB, B., ATCC Catalog, ATCC Number CRL-2496.	
	R39	TOROK-STORB, B. et al. "Dissecting the marrow microenvironment" <i>Ann. NY Acad. Sci.</i> , 1999, 872:164-170.	

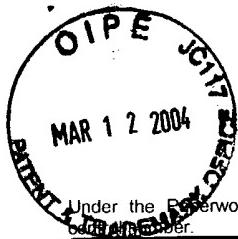
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	R40	TAICHMAN, R.S. and S.G. EMERSON "Human osteoblasts support hematopoiesis through the production of granulocyte colony-stimulating factor" <i>J. Exp. Med.</i> , 1994, 179:1677-1682.	
	R41	TERADA, N. et al. "Bone marrow cells adopt the phenotype of other cells by spontaneous cell fusion" <i>Nature</i> , 2002, 416:542-545.	
	R42	THOMAS, T. et al. "Leptin acts on human marrow stromal cells to enhance differentiation to osteoblasts and to inhibit differentiation to adipocytes" <i>Endocrinology</i> , 1999, 140:1630-1638.	
	R43	TREMAIN, N. et al. "MicroSAGE analysis of 2,353 expressed genes in a single cell-derived colony of undifferentiated human mesenchymal stem cells reveals mRNAs of multiple cell lineages" <i>Stem Cells</i> , 2001, 19:408-418.	
	R44	WINEMAN, J. et al. "Functional heterogeneity of the hematopoietic microenvironment: Rare stromal elements maintain long-term repopulating stem cells" <i>Blood</i> , 1996, 87(10):4082-4090.	
	R45	WOODBURY, D. et al. "Adult bone marrow stromal stem cells express germline, ectodermal, endodermal, and mesodermal genes prior to neurogenesis" <i>J. Neuroscience Res.</i> , 2002, 96:908-917.	
	R46	YAMAZAKI, K. et al. "A comparative morphometric study on the ultrastructure of adherent cells in long-term bone marrow culture from normal and congenitally anemic mice" <i>Blood Cells</i> , 1989, 15:343-364.	
	R47		
	R48		
	R49		
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	R51		
	R52		

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